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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,065	01/31/2001	Jong-Sung Kim	053785-5002	1818
9629	7590	12/17/2003	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			NGUYEN, HOAN C	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/774,065

Applicant(s)

KIM, JONG-SUNG

Examiner

HOAN C. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-2, 4-8 and 10-12 is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to Amended claims 1, 7 and New claims 13-17 have been considered but are moot in view of the new ground(s) of rejection. Therefore, this is Final action.

Applicant cancelled claims 3 and 9.

New claims 13-17 are similar to original claims 1, 2 and 4-6 (filed on 1/31/2001), which have been rejected previously. This rejection is repeated here.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US6086443A).

In regards to claims 13-16, Shin et al. teach (Fig. 1 col. 1 lines 21-48, Figs. 3-6, experiment 1, col. 6 lines 15-39) a method of fabricating a liquid crystal display panel having first and second substrates, wherein

- The first cell gap should be less than $5.7\mu\text{m}$ at first pressurizing and heat process (hot press step) with 0.6 kg f/cm^2 , thus cell gap is at least $5\mu\text{m}$

("at least 5 μ m" means greater or equal 5 μ m) for adhering seal members to substrates (claim 15).

- the second cell gap should be in a range 4.41-4.56 μ m or at least 4 μ m ("at least 4 μ m" means greater or equal 4 μ m) at second pressurizing and heating process with P1/P2/P3 (0.1/0.5/0.3 kg f/cm²) of the end seal step for adhering the spacers to substrates (claim 16).
- the step of sealing the first gap before step of performing the second pressurizing and heating process (claim 14)

However, Shin et al. fail to disclose explicitly the first and second orientation films.

It was well known art that the orientation films on substrates for aligning the liquid crystal molecules to modulate the light.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a method of fabricating a LCD panel as Shin et al disclosed with the orientation films on substrates for aligning the liquid crystal molecules to modulate the light.

1. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US6086443A) in view of Nakahara et al. (US6104467A).

Nakahara et al. disclose as conventional art (Figs. 1 and 4) a method of fabricating a liquid crystal display panel having first and second substrates, wherein sealing is performed by using a thermoplastic resin (thermosetting resin including glass beads or the like operating as a spacer inside the seal is used, and glass beads or

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plastic beads). Thermosetting resin can be thermoplastic used as conventional art for adhering under heating process.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a method of fabricating a LCD panel as Shin et al disclosed with sealing being performed by using a thermoplastic resin for adhering under heating process.

Allowable Subject Matter

Claims 1-2, 4-8 and 10-12 are allowed. The following is an examiner's statement of reasons for allowance:

Claims 1 and 7 are allowed since there is no prior art teaches a method of fabricating a liquid crystal display panel with

- the second heating process being sufficient to soften the seal member;
- the second pressurizing and heating process applying a greater pressure and higher temperature to the first and second substrates than the first pressurizing and heating process;
- the second pressurizing and heating process generating the second cell gap, which is narrower than the first cell gap.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (703) 306-0472. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

HOAN C. NGUYEN
Examiner
Art Unit 2871

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T. Chaothury
Primary Examiner